



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|-------------------------|
| 10/785,400 | 02/25/2004 | Takayuki Isogai | 1417-451 | 9810 |
| 23117 | 7590 | 11/25/2005 | EXAMINER | |
| NIXON & VANDERHYE, PC | | | OH, TAYLOR V | |
| 901 NORTH GLEBE ROAD, 11TH FLOOR | | | | |
| ARLINGTON, VA 22203 | | | ART UNIT | PAPER NUMBER |
| | | | 1625 | |
| | | | | DATE MAILED: 11/25/2005 |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/785,400 | ISOGAI ET AL. | |
| | Examiner | Art Unit | |
| | Taylor Victor Oh | 1625 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 September 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-9 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 13 September 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Final Rejection

The Status of Claims:

Claims 1-9 are pending.

Claims 1-9 have been rejected.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of Claims 1-9 under 35 U.S.C. 112, second paragraph has been withdrawn due to the modification of the claims made in the amendment.

Claim Rejections - 35 USC § 103

I. Applicants' argument filed 9/13/05/04 have been fully considered but are not persuasive.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The rejection of Claims 1-9 under 35 USC 103 (a) as being unpatentable over Desai et al (US 5,653,673) in view of Bird Machine Co. (GB 1065,340) and David et al (Physics, 1978, p.102-103,174-176, and 223).

1. The rejection of Claims 1-9 under 35 USC 103 (a) as being unpatentable over Desai et al (US 5,653,673) in view of Bird Machine Co. (GB 1065,340) and David et al (Physics, 1978, p.102-103,174-176, and 223) has been maintained with the reasons of record on 4/22/05.

2. The rejection of Claims 1-3 ,and 6-9 under 35 USC 103 (a) as being unpatentable over Johannemann et al (US 5,971,907) in view of Bird Machine Co. (GB 1065,340) and David et al (Physics, 1978, p.102-103,174-176, and 223) has been withdrawn due to applicants' convincing argument.

Applicants' Argument

Applicants argue the following issues:

- a. In the case of a conventional screen-type centrifugal separator as shown in the prior art Bird Machine Co. provided with a screw conveyor, clogging is promoted by the cakes formed in a compacted state on the inside of the screen.
- b. There is no description nor suggestion in the Physics textbook of David et al that a screen with an opening size that allows partial escape of crystals in the supplied slurry through the screen openings could be used as the screen of the screen -typed centrifugal separator.

c. The Johannemann et al does not remedy the defects in the other prior art because there is no mention of a screen or similar-type apparatus associated with the separator device described in the prior art .

Applicants' arguments have been noted, but the arguments are not persuasive.

First, regarding the first argument , the Examiner has noted applicants' arguments. However, the prior art Bird Machine Co. has disclosed the problems associated with using the screens in centrifugal separators, which is the retention of an excessively large proportion of liquid in the solid discharge as well as to the necessity for frequent interruption of operation in order to clear the screens (see page 1 , lines 24-30). Also, the same prior art has been provided with the solution for those problems by introducing the inner surface of imperforate conical portion (82) distant from the inlet of screen portion (84) along the axis of the centrifugal separator for slurries(see page 3 ,lines 81- 85) as shown in fig 3. Therefore, unlike applicants' argument, the prior art is still relevant to the claimed invention.

Second, regarding the second argument , the Examiner has noted applicants' arguments. However, the prior art David et al has been used to explain the relationship between the centrifugal force and the mass flow rate during the process of allowing escape of an certain amount of crystals through the screen. Furthermore, another prior art Bird Machine Co has expressly offered guidance that the size of the apertures can be controlled in order to allow a minimum size of the fine particles passing through the screen ,depending on the nature and

particle size of the solids(page 2 ,lines 126-130) and (page 3 ,lines 1-2). Therefore, the secondary and the tertiary prior arts are still relevant to the claimed invention.

Third, regarding the third argument , the Examiner has agreed with applicants' arguments.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

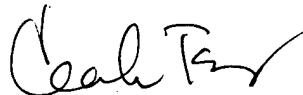
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

Art Unit: 1625

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 6, 2008
a/22/08


Cecilia J. Tsang
Supervisory Patent Examiner
Technology Center 1600